

WHAT IS CLAIMED IS:

1. User interactive apparatus for conducting a search of a data base containing data for a universe of financial instruments, said search including the performance of n filter passes of said data for said universe, said apparatus comprising:

a computer system including a processor, a memory, a viewing screen, a computer input device and a financial instrument search procedure, said financial instrument search procedure operating said processor to conduct said search of said data base in response to user operation of said computer input device, wherein prior to an  $i^{\text{th}}$  filter pass, a plurality of filter criteria for said financial instruments are presented on said viewing screen for user selection of at least one of said criteria as a proposed filter condition by operation of said computer input device, where  $i$  is an integer from 1 and  $n$ , and wherein a population chart for said selected proposed filter condition is presented on said viewing screen, said population chart showing the population of said financial instruments in different categories for said proposed filter condition as an aid to the user for selecting one or more of said filter criteria for said  $i^{\text{th}}$  filter pass.

2. The apparatus according to claim 1, wherein said population chart is a histogram and said categories are frequency of occurrence categories.

3. The apparatus according to claim 2, wherein said filter criteria include a plurality of investment parameters, there being a different histogram for each investment parameter, said investment parameters being selectable by user

operation of said computer input device for selecting said histogram for presentation on said viewing screen.

4. The apparatus according to claim 3, wherein said plurality of filter criteria further includes a plurality of parameter limiters that are presented on said viewing screen.

5. The apparatus according to claim 4, wherein said plurality of parameter limiters includes two or more mathematical operators selected from the group that includes equality, inequality, equal to or greater than, equal to or less than, and not equal to.

6. The apparatus according to claim 5, wherein a filter pass run activator is presented on said viewing screen, said filter run activator being user operable to cause said processor, memory and memory access device to execute said ith filter pass.

7. The apparatus according to claim 6, wherein said financial instrument search procedure includes an investment category filter for filtering said universe of financial instruments by a set of investment categories.

8. The apparatus according to claim 7, wherein an investment category filter activator is presented on said viewing screen, said investment category filter activator being user operable to select an investment category filter pass.

9. The apparatus according to claim 3, wherein said histogram and said plurality of investment parameters are presented simultaneously on said viewing screen.

10. The apparatus according to claim 4, wherein said histogram and said plurality of investment parameters are presented simultaneously on said viewing screen.

11. The apparatus according to claim 10, wherein said histogram, all of said investment parameters and all of said parameter limiters are simultaneously presented on said viewing screen.

12. The apparatus according to claim 11, wherein said viewing screen includes first and second display areas; and

wherein said investment parameters are presented in said first display area and said histogram is presented in said second display area.

13. The apparatus according to claim 12, wherein said parameter limiters are presented in said first display area.

14. The apparatus according to claim 13, wherein said areas are presented in a split screen format.

15. The apparatus according to claim 14, wherein a filter pass run activator is presented in said first display area, said filter run activator being user operable to cause said processor, memory and memory access device to execute said filter pass.

16. The apparatus according to claim 15, wherein said financial instrument search procedure includes an investment category filter for filtering said universe of financial instruments by a set of investment categories.

17. The apparatus according to claim 16, wherein an investment category filter activator is displayed on said viewing screen, said investment category filter activator

being user actuated by user operation of said computer input device to select an investment category filter pass.

18. A method of searching a universe of financial instruments by performing n filter passes of said universe with a computer having a processor, a memory, a viewing screen and a computer input device, each said filter pass having a filter condition, said method comprising:

(a) presenting on said viewing screen a plurality of investment parameters, at least one of said investment parameters being selectable by user operation of said computer input device as a proposed filter condition;

(b) presenting on said viewing screen a population chart showing the population of said financial instruments in different categories for said proposed filter condition of an  $i^{\text{th}}$  one of said filter passes, where  $i$  is an integer from 1 to  $n$ , said proposed filter condition including (a) at least one investment parameter selected by user operation of said computer input device and (b) all filter conditions for previously performed ones of said filter passes;

(c) executing said proposed filter pass in response to a run command generated by user operation of said computer input device; and

(d) repeating steps (a), (b) and (c) until the  $n^{\text{th}}$  filter pass has been performed.

19. The method according to claim 18, wherein said population chart is a histogram and said categories are frequency of occurrence categories, and wherein steps (a) and (b) concurrently present said plurality of investment parameters and said histogram on said viewing screen.

20. The method according to claim 19, further comprising:

(e) presenting on said viewing screen a parameter limiter, said parameter limiter being user selectable to limit a selected investment parameter in forming said proposed filter condition.

21. The method according to claim 20, wherein said parameter limiter is one of a plurality of parameter limiters, said plurality of parameter limiters being presented on said viewing screen.

22. The method according to claim 21, wherein said plurality of investment parameters and said plurality of parameter limiters are presented in a first area of said screen and said histogram is presented in a second area of said screen.

23. The method according to claim 22, wherein said n filter passes are combined with an additional filter pass that has filter conditions selected from a plurality of investment categories for said financial instruments.

24. A memory media for controlling a computer to search a universe of financial instruments by performing n filter passes of said universe, said computer having a viewing screen and a computer input device, each said filter pass employing a filter condition, said memory media comprising:

means for controlling said computer to perform the following steps:

(a) presenting on said viewing screen a plurality of investment parameters, said investment parameters being selectable by user operation of said computer input device;

(b) presenting on said viewing screen a population chart showing the population of said financial instruments in different categories for a proposed filter condition of an  $i^{\text{th}}$  one of said filter passes, where  $i$  is an integer from 1 to  $n$ , said proposed filter condition including (i) at least one investment parameter selected by user operation of said computer input device and (ii) all filter conditions for previously performed ones of said filter passes;

(c) executing said proposed filter pass in response to a run command generated by user operation of said computer input device; and

(d) repeating steps (a), (b) and (c) to repeat until the  $n^{\text{th}}$  filter pass has been performed.

25. A memory media according to claim 24, wherein said population chart is a histogram and said categories are frequency of occurrence categories.

26. A memory media according to claim 25, wherein said means for controlling causes said computer to perform the following further step:

(e) presenting on said viewing screen a parameter limiter, said parameter limiter being user selectable to limit a selected investment parameter in forming said proposed filter condition.

27. The method according to claim 26, wherein said parameter limiter is one of a plurality of parameter limiters, said plurality of parameter limiters being presented on said viewing screen.

28. The computer media according to claim 27, wherein steps (a) and (e) present said plurality of investment parameters and said plurality of parameter limiters in a first area of said viewing screen and said histogram in a second area of said viewing screen.

29. The computer media according to claim 28, wherein said n filter passes are combined with an additional filter pass that has a filter condition selected from a plurality of investment categories for said financial instruments.

30. User interactive apparatus for conducting a search of a data base containing data for a universe of financial instruments, said search including the performance of a filter pass of said data for said universe, said apparatus comprising:

a computer including a processor, a memory, a viewing screen, a computer input device and a financial instrument search procedure, said financial instrument search procedure configuring said processor to operate said memory and said viewing screen to conduct said search of said data base in response to user operation of said computer input device, wherein a plurality of investment parameters for said financial instruments is presented on said viewing screen for user selection of at least one of said investment parameters as a proposed filter condition by operation of said computer input device, and wherein a population chart for said selected proposed filter condition is presented on said viewing screen, said population chart showing the population of said financial instruments in different categories for said proposed filter condition as an aid to the user for selecting one or more of said investment parameters for said filter pass.

30. The apparatus according to claim 29, wherein said population chart is a histogram and said categories are frequency of occurrence categories.

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31. The apparatus according to claim 30, wherein there is a different histogram for each investment parameter, said investment parameters being selectable by user operation of said computer input device for selecting said histogram for presentation on said viewing screen.

32. The apparatus according to claim 31, wherein a plurality of parameter limiters is presented on said viewing screen, said parameter limiters being selectable by user operation of said computer input device for selecting one of said parameter limiters to limit a selected investment parameter for said proposed filter condition.

33. The apparatus according to claim 32, wherein said plurality of parameter limiters includes two or more mathematical operators selected from the group that includes equality, inequality, equal to or greater than, equal to or less than, and not equal to.

34. The apparatus according to claim 33, wherein said histogram and said plurality of investment parameters are presented simultaneously on said viewing screen.

35. The apparatus according to claim 34, wherein a first one of said categories for a selected investment parameter is presented as a display element of said histogram;

wherein a number is presented on said viewing screen in association with said display element;



wherein a first limiter activator for a parameter limiter is presented on said viewing screen in association with said number; and

wherein said first limiter activator is user operable to cause said processor, memory and memory access device to select said parameter limiter and said number, whereby said proposed filter condition is formed by said parameter limiter, said number and said selected investment parameter.

36. The apparatus according to claim 35, wherein said histogram and said selected investment parameter are simultaneously presented on said viewing screen; and

wherein upon user operation of said first actuator, said parameter limiter and said number are presented on said viewing screen in association with said selected investment parameter.

37. The apparatus according to claim 36, wherein said parameter limiter is one of a plurality of parameter limiters, said plurality of parameter limiters being presented on said viewing screen.

38. The apparatus according to claim 37, wherein said viewing screen includes first and second display areas; and

wherein said investment parameters are presented in said first display area and said histogram is presented in said second display area.

39. The apparatus according to claim 38, wherein said parameter limiters are presented in said first display area.

40. The apparatus according to claim 39, wherein said areas are presented in a split screen format.

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